

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. 97-090
NPDES NO. CA0053813

WASTE DISCHARGE REQUIREMENTS
FOR
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
(JOINT WATER POLLUTION CONTROL PLANT)

The California Regional Water Quality Control Board, Los Angeles Region, (hereinafter Regional Board) finds:

Regulation of Discharge

1. The County Sanitation Districts of Los Angeles County (CSDLAC) operates the Joint Water Pollution Control Plant (JWPCP), a regional wastewater treatment facility, located at 24501 South Figueroa Street in Carson, California. The plant serves about 2.6 million people and treats municipal and industrial wastewater, as well as sludge from other CSDLAC wastewater treatment plants located upstream of JWPCP. Figure A is the location and service area map of JWPCP.
2. JWPCP discharges a blend of primary and secondary treated wastewater to the Pacific Ocean, a water of the United States, at Whites Point, off the Palos Verdes Peninsula. The discharge is regulated under waste discharge requirements contained in Order No. 91-112 adopted by this Regional Board on October 28, 1991. Order No. 91-112 serves as a permit under the National Pollutant Discharge Elimination System (NPDES) [No. CA0053813]. Order No. 91-112, as with previous permits regulating the discharge from JWPCP, contains full secondary treatment requirements pursuant to §301(b) of the Federal Clean Water Act.
3. Since 1979, CSDLAC had been requesting a variance from secondary treatment requirements for discharges from JWPCP pursuant to Clean Water Act §301(h). The variance request underwent several modifications and on December 21, 1990, the U. S. Environmental Protection Agency (USEPA) issued a final decision denying the variance request.
4. On January 6, 1992, USEPA Region IX and the Regional Board filed in federal court a complaint against CSDLAC for civil penalty and injunctive relief for failure to provide full secondary treatment for its discharge from JWPCP and for raw sewage spills from the collection system. The case was settled and the consent decree was entered into federal court records on June 8, 1994 [No. 92 0061 RG (JRx)]. The consent decree primarily requires CSDLAC to construct additional secondary treatment facilities and achieve

compliance with full secondary treatment by December 31, 2002.

5. While the §301(h) variance request was being processed and until adequate secondary treatment facilities are constructed, JWPCP discharge cannot meet the full secondary treatment requirements. Therefore, on November 28, 1988, this Regional Board issued Cease and Desist Order No. 88-134 that contains interim limits. These interim limits were incorporated into the consent decree and in this Order.
6. CSDLAC has timely filed a report of waste discharge for reissuance of waste discharge requirements and NPDES permit for JWPCP discharges pursuant to 40 Code of Federal Regulations (CFR) §122.21(d) and California Code of Regulations (CCR), Title 23 §2235.4.

Description of Facility and Discharge Outfalls

7. JWPCP is part of a Joint Outfall System with six upstream water reclamation plants - La Cañada, Whittier Narrows, San Jose Creek, Pomona, Los Coyotes and Long Beach. It treats municipal (about 85%) and industrial (about 15%) wastewater. The sludge generated from the upstream plants are returned to the joint outfall trunk sewers which conveys the sludge to JWPCP for further treatment. JWPCP has a dry weather average design treatment capacity of 385 million gallons per day (mgd) and a peak design capacity of 540 mgd. For the past five years (1992 - 1996) flow to the plant has averaged 330 mgd.
8. Figure B shows the flow diagram of the treatment system at JWPCP. Treatment includes bar screening, grit removal, and primary sedimentation. To facilitate solids separation in the sedimentation tanks, polymer is added at the grit chambers. Effluent from the sedimentation tanks separates into two routes - the advanced primary effluent route and the secondary effluent route. In the advanced primary route, the primary effluent is passed through screens and sent to the primary effluent forebay where it is chlorinated with calcium hypochlorite before it is pumped into the outfall manifold.
9. In the secondary effluent route, the primary effluent is biologically treated in pure oxygen activated sludge reactors, clarified, chlorinated and pumped into the outfall manifold, where it mixes with the advanced primary effluent before discharge to the ocean. JWPCP at present provides secondary treatment for 200 mgd of wastewater (60 % of total effluent).
10. Solid fractions recovered from the wastewater treatment processes include grit, advanced primary screenings, primary sludge and skimmings, thickened waste activated sludge, digested sludge screenings and digester cleaning solids. The fine solids (grit, advanced primary screenings, digested sludge screenings, digester cleaning solids) which are primarily inorganic materials are hauled away to landfill. The remaining solid fractions

(primary sludge and skimmings, thickened waste activated sludge) are anaerobically digested onsite. The digested solids are screened, and dewatered using scroll centrifuges. The dewatered cake containing about 25% solids (biosolids) are applied to land and composted for use as soil amendment. Biosolids that are not reused are hauled to CSDLAC's Puente Hill Landfill.

Digester gas (containing about 65% methane), produced from anaerobic digestion of sludge, is used onsite to generate electric power, as fuel for internal combustion engines that drive the effluent pumps, as fuel for producing process steam used in digester heating and also as fuel for supplemental digester heating. The use of digester gas allows JWPCP to be self-sufficient in its energy needs. Standby flares are maintained to dispose of surplus gas.

11. JWPCP discharges a blend of advanced primary (about 40%) and secondary (about 60%) effluents. From the plant after chlorination, the effluents travel about 6.5 miles through tunnels and mix at the outfall manifold before discharged to the Pacific Ocean, at Whites Point off the Palos Verdes Peninsula. The outfalls are described as follows:

<u>Discharge Serial No.</u>	<u>Description</u>
001	Latitude - 33° 41' 52" Longitude - 118° 19' 27" 120-inch ocean outfall at about 12,000 feet due south of shoreline off Whites Point, San Pedro and about 200 feet below the ocean surface. This outfall carries about 65% of the effluent.
002	Latitude - 33° 42' 02" Longitude - 118° 20' 14" 90-inch ocean outfall at about 10,400 feet offshore southwest of Whites Point, San Pedro, and about 200 feet below the ocean surface. This outfall carries about 35% of the effluent.

There are other 12 discharge points (Discharge Serial Nos. 003 through 014) which are only used for emergency bypass and/or hydraulic relief of the plant. Locations and descriptions of these outfalls are given in Attachment 1.

Waste Discharge Requirements and their Bases

12. On June 13, 1994, this Regional Board adopted a revised basin plan, *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. The plan incorporates by reference the State Water Resources Control Board's (State Water Board) Water Quality Control Plans and policies on ocean waters [*Water Quality Control Plan for Ocean Waters in California*, March 22, 1990], temperature [*Water Quality Control Plan for Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*, amended September 18, 1975] and antidegradation [*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution No. 68-16, October 28, 1968].

13. JWPCP discharges into the Palos Verdes Shelf which is part of the Palos Verdes Peninsula watershed. The Basin Plan contains water quality objectives for and lists the following beneficial uses for the receiving waters in the Palos Verdes Peninsula:

Point Vicente Beach, Royal Palms Beach, Whites Point County Beach (Hydrologic Unit 405.11)

Potential: spawning, reproduction, and/or early development of fish;
Existing: navigation, water contact recreation, non-contact water recreation, ocean commercial and sport fishing, preservation of rare and endangered species, marine habitat, and shellfish harvesting.

Nearshore Zone

Existing: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, wild habitat, preservation of biological habitats, rare, threatened, or endangered species, migration of aquatic organisms, spawning, and shellfish harvesting;

Offshore Zone

Existing: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, wild habitat, migration of aquatic organisms, and spawning, reproduction, and/or early development, rare threatened or endangered species, and shellfish harvesting.

14. The 1996 Water Quality Assessment listed "aquatic life" and "fish consumption" as the beneficial use categories which are impaired in the Santa Monica Bay Nearshore and Offshore Zone, which includes the Palos Verdes shelf. Impairment of aquatic life was based on sediment contamination (cadmium, copper, lead, mercury, nickel, zinc, PCBs, DDT, chlordane, PAHs), bioaccumulation by marine organisms (silver, chromium, lead,

DDT, PCBs), and sediment toxicity. Impairment of seafood consumption was based on the health advisories issued by the State Office of Environmental Health Hazard Assessment restricting human consumption of certain fish species from some areas of Santa Monica Bay.

15. The receiving waters in the Palos Verdes Peninsula watershed are impacted primarily because of elevated concentrations of contaminants such as PCBs and DDT. From 1947 to 1983, Montrose Chemical Corporation of California, Inc. ("Montrose") operated a DDT manufacturing plant in Los Angeles County which discharged wastewater containing significant concentrations of DDT to the Joint Outfall System and conveyed to JWPCP. The DDT was ultimately discharged to the ocean through the White's Point outfall. PCB's were also discharged from the White's Point ocean outfall. Historically, PCBs entered the Joint Outfall System as the result of discharges from several sources in the greater Los Angeles area.

The highest concentrations of DDT and PCB are in a layer of low density sewage-derived sediments around the main sewer outfalls at White's Point on the Palos Verdes Shelf. Studies by the United States Geological Survey (USGS) in 1992 and 1993 have shown this layer of contaminated sewage sediments is about 2 inches to 2 feet thick and covers an area of more than 15 square miles. The contaminant concentrations in these sediments range from approximately 1 to 200 ppm for DDT and between 0.5 and 15 ppm for PCBs, forming a total mass of DDTs exceeding 100 metric tons and PCBs exceeding 10 metric tons. According to the USGS studies, at least half of the present mass of DDT is expected to remain in the sediment of the Palos Verdes Shelf through the year 2100.

Sediment contaminants affect bottom dwelling organisms and other sediment-associated organisms, the water column, and the food web. Certain fish from the Palos Verdes Shelf are contaminated with high levels of DDT and PCBs. Continuous exposure of these hazardous substance to the food web results in risks to human health. White croaker was found to be the most contaminated fish from this region. Other species found to be relatively contaminated are California corbina, queenfish, surf perches, and California scorpionfish.

USEPA has considered the DDT/PCB contaminated area as a superfund site. It has investigated the contaminated area off the Palos Verdes Shelf and is investigating the feasibility of various technologies for remediating the contaminated sediments.

16. This Regional Board has implemented a Watershed Management Approach to address water quality protection in the region. The objective is to provide a comprehensive and integrated strategy towards water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically-defined drainage basin or watershed. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed

to achieve the greatest environmental improvements with the resources available. This Order supports the implementation of this approach.

17. According to this Regional Board's watershed initiative framework, the Santa Monica Bay Watershed Management Area is the targeted watershed for fiscal year 1996-97 and includes the Santa Monica Bay and the land area that drains naturally into the Bay. Santa Monica Bay extends from the Los Angeles/Ventura County line to the northwest near Point Dume to Point Fermin on Palos Verdes Peninsula to the southwest¹. JWPCP discharges its effluent to the Palos Verdes Peninsula sub-watershed, which extends from the southern boundary of the City of Torrance to Point Fermin along the coastline.
18. The Santa Monica Bay Restoration Project (SMBRP) developed the Bay Restoration Plan that serves as a blueprint for the restoration and enhancement of the Bay. The Regional Board plays a leading role in the implementation of the plan. Three of the proposed priorities of the plan are reduction of pollutants of concern at the source (which includes municipal wastewater treatment plants), attainment of full secondary treatment at JWPCP and the City of Los Angeles' Hyperion Treatment Plant, and implementation of the mass emission approach.
19. The 1996 State Water Resources Control Board's (SWRCB) Water Quality Assessment Report² and the Bay Restoration Plan identified the following as pollutants of concern for Santa Monica Bay: dichloro-diphenyl trichloroethane (DDT), polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), chlordane, tributyltin (TBT), heavy metals (cadmium, chromium, copper, lead, nickel, silver, zinc), bacteria/viruses, total suspended solids, nutrients, chlorine, oxygen demand, oil and grease, and trash.
20. On March 22, 1990, the State Water Resources Control Board adopted a revised Water Quality Control Plan for the Ocean Waters of California (Ocean Plan). The revised plan contains water quality objectives for the coastal waters of California. This Order includes effluent and receiving water limitations, prohibitions, and provisions which implements the objectives of the Plan. The numerical effluent limitations were calculated using the State Board calculated minimum dilution ratio for JWPCP's outfall system of 166 parts sea water to one part effluent.
21. For constituents with performance level which are orders-of-magnitude lower than calculated limits based on Ocean Plan objectives, and which have a very low probability

¹ *Santa Monica Bay: State of the Watershed Report*, California Regional Water Quality Control Board, Los Angeles Region, May 1997.

² *California 305(b) Report on Water Quality*, State Water Resources Control Board, August 1996.

28. Effluent limitations, toxic and pretreatment effluent standards, and ocean discharge criteria established pursuant to Sections 208(b), 301, 302, 303(d), 304, 307, 403, and 405 of the Clean Water Act and amendments thereto are applicable to the discharge.
29. Pursuant to Section 402 (p) of the Clean Water Act and 40 CFR Parts 122, 123 and 124, the State Water Board adopted general NPDES permits to regulate stormwater discharges associated with industrial activity (State Water Board Order No. 97-03-DWQ adopted on April 17, 1997) and construction activity (State Board Order No. 92-08-DWQ adopted on August 20, 1992). JWPCP is covered under these general permits.
30. This Order prescribes receiving water bacteriological standards for recreational and shellfish harvesting beneficial uses. To meet the standards, JWPCP effluent is chlorinated using calcium hypochlorite solution before leaving the plant. The chlorinated effluent travels between 2 to 3 hours through the 6 miles of tunnels to the outfall manifold where residual chlorine is below detection. The amount of chlorine used is dependent upon recent bacteriological results from shore and nearshore stations around Palos Verdes. In 1996, 8,471 tons of chlorine were used for disinfection. The impact of chlorination products on the environment has not been evaluated. It is impractical to obtain representative samples at the manifold for halomethanes and toxicity testing.

This Order requires CSDLAC to conduct a special study to investigate potential toxic effects associated with formation of chlorinated compounds from chlorination of the effluent. CSDLAC will perform parallel chronic toxicity testing with chlorinated and unchlorinated effluent. If the study indicates a significant difference in toxicity between the unchlorinated and chlorinated effluents, this Order will be reopened for the Board to consider requiring CSDLAC to perform a chlorination study to optimize chlorine usage.
31. The requirements contained in this Order are based on the Basin Plan, Ocean Plan, other federal and state plans and policies, plant performance, and best engineering judgment, and are intended to protect the beneficial uses of the receiving waters.
32. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with §21100, et. seq.), Division 13, Public Resources Code, pursuant to Water Code §13389.

The Regional Board has notified the discharger, and interested agencies and persons of their intent to renew waste discharge requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

The Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements. All orders referred to above and records of hearings and testimony therein are included herein by reference.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to §402 of the Federal Clean Water Act, or amendments thereto, and shall take effect at the end of ten days from the date of adoption provided the USEPA Regional Administrator has no objections.

IT IS HEREBY ORDERED that the County Sanitation Districts of Los Angeles County, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE REQUIREMENTS

I. DISCHARGE LIMITATIONS AND PERFORMANCE GOALS

1. The effluent discharge limitations and performance goal values for Discharge Serial Nos. 001, 002, 003, and 004 are given below. The discharge of an effluent with constituents in excess of the discharge limitation is prohibited. For performance goals, any exceedance of its value shall trigger an investigation by CSDLAC on the cause of the exceedance. If the exceedance persists in two successive monitoring periods (monthly/quarterly), CSDLAC will investigate the exceedance and submit a written report to the Regional Board with the description of the problem, and propose corrective measures, if necessary.

(a). Major Wastewater Constituents

<u>Constituent</u>	<u>Units</u>	<u>DISCHARGE LIMITATIONS^{[1][2]}</u>			<u>EFFLUENT QUALITY</u>
		<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum^[3]</u>	<u>PERFORMANCE GOALS^[18]</u>
BOD ₅ 20°C ^[4]	mg/l	30	45	---	106 ^[19]
	kg/day	43,700	65,600	---	
	lbs/day	96,400	145,000	---	
Suspended ^[4] Solids	mg/l	30	45	---	77 ^[19]
	kg/day	43,700	65,600	---	
	lbs/day	96,400	145,000	---	
Settleable ^[4] Solids	ml/l	0.5	0.75	1.5	---
Turbidity	NTU	75	100	225	---
Acute Toxicity	TUa	1.5	2	2.5	---

(b). Toxic Materials

i. Marine Aquatic Life Toxicants

<u>Constituent</u>	<u>Units</u>	<u>DISCHARGE LIMITATIONS</u> ^{[2][5]}			<u>EFFLUENT QUALITY</u> <u>PERFORMANCE GOALS</u> ^[18]
		<u>Monthly</u> <u>Average</u>	<u>Weekly</u> <u>Average</u>	<u>Daily</u> <u>Maximum</u> ^[3]	<u>Monthly Average</u>
Arsenic	µg/l	^[6]			4 ^[19]
Cadmium	µg/l	167	668	1,670	2 ^[19]
	kg/day	250	1,000		
	lbs/day	550	2,200		
Chromium (hexavalent) ^[7]	µg/l	334	1,336	3,340	^[23]
	kg/day	487	1,948		
	lbs/day	1,070	4,280		
Copper	µg/l	169	676	1,690	^[20]
	kg/day	246	984		
	lbs/day	542	2,168		
Mercury	µg/l	6.6	26.4	66	^[23]
	kg/day	9.4	37.6		
	lbs/day	21	84		
Nickel	µg/l	835	3340	8,350	66 ^[19]
	kg/day	1,214	4,856		
	lbs/day	2,671	10,684		
Selenium	µg/l	^[6]			23 ^[19]
Silver	µg/l	91	364	910	^[20]
	kg/day	132	528		
	lbs/day	291	1,164		
Zinc	µg/l	2,012	8,048	20,120	^[20]
	kg/day	2,931	11,724		
	lbs/day	6,448	25,792		

<u>Constituent</u>	<u>Units</u>	<u>DISCHARGE LIMITATIONS</u> ^{[2][5]}			<u>EFFLUENT QUALITY PERFORMANCE GOALS</u> ^[18]
		<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u> ^[3]	<u>Monthly Average</u>
Cyanide	µg/l	167	668	1,670	20 ^[19]
	kg/day	244	976		
	lbs/day	537	2,148		
Total Residual Chlorine	µg/l	334	1336	10,020	300 ^[19]
	kg/day	486	1,946		
	lbs/day	1,070	4,280		
Ammonia (as N)	mg/l	^[6]			40 ^[21]
Phenolic Compounds (Non-Chlorinated)	µg/l	^[6]			35 ^[21]
Phenolic Compounds (Chlorinated)	µg/l	167	668	1,670	16 ^[21]
	kg/day	244	976		
	lbs/day	537	2,148		
Endosulfan	ng/l	1,500 ^[8]	6,000	15,000	^[22]
	kg/day	2.2	8.8		
	lbs/day	4.8	19.2		
HCH ^[9]	ng/l	700 ^[8]	2,800	7,000	^[22]
	kg/day	1	4		
	lbs/day	2.2	8.8		
Endrin	ng/l	400 ^[8]	1,600	4,000	^[22]
	kg/day	0.6	2.4		
	lbs/day	1.3	5.2		
Chronic Toxicity ^[10]	TUc			167	---

ii. Non-Carcinogens

<u>Constituent</u>	<u>Units</u>	<u>DISCHARGE LIMITATIONS^{[2][5]}</u>	<u>EFFLUENT QUALITY PERFORMANCE GOALS^[19]</u>
		<u>Monthly Average</u>	<u>Monthly Average</u>
Antimony	µg/l	[6]	26 ^[19]
Diethyl phthalate	µg/l	[6]	7 ^[19]
Ethylbenzene	µg/l	[6]	9 ^[19]
Nitrobenzene	µg/l	819	[23]
Toluene	µg/l	[6]	130 ^[19]
Tributyltin	ng/l	233 ^[8]	[22]
1,1,1-Trichloro-ethane	µg/l	[6]	31 ^[19]

iii. Carcinogens

<u>Constituent</u>	<u>Units</u>	<u>DISCHARGE LIMITATIONS^{[2][5]}</u>	<u>EFFLUENT QUALITY PERFORMANCE GOALS^[18]</u>
		<u>30-day Average</u>	<u>30-day Average</u>
Acrylonitrile	µg/l	17	[23]
Aldrin	ng/l	4 ^[8]	[22]
Benzene	µg/l	985	71 ^[19]
Benzidine	ng/l	12 ^[8]	[22]
Beryllium	µg/l	5.5	3 ^[19]
Bis(2-chloroethyl)-ether	µg/l	7.5	[23]
Bis(2-ethylhexyl)-phthalate	µg/l	585	16 ^[19]

<u>Constituent</u>	<u>Units</u>	<u>DISCHARGE LIMITATIONS^{[2][5]}</u>	<u>EFFLUENT QUALITY PERFORMANCE GOALS^[18]</u>
		<u>Monthly Average</u>	<u>Monthly Average</u>
Carbon tetrachloride	µg/l	151	[23]
Chlordane ^[11]	ng/l	4 ^[8]	[22]
Chloroform	µg/l	[6]	24 ^[19]
DDT ^[12]	ng/l	29 ^[8]	[22]
3,3-Dichloro-benzidine	ng/l	1,353 ^[8]	[22]
1,2-Dichloroethane	µg/l	22	[23]
Dichloromethane	µg/l	75	20 ^[19]
Dieldrin	ng/l	7 ^[8]	[22]
1,2-Diphenyl-hydrazine	µg/l	27	[23]
Halomethanes ^[13]	µg/l	[6]	2 ^[19]
Heptachlor ^[14]	ng/l	120 ^[8]	[22]
Hexachloro-benzene	ng/l	35 ^[8]	[22]
PAHs ^[15]	ng/l	1,470 ^[8]	[22]
PCBs ^[16]	ng/l	3 ^[8]	[22]
TCDD equivalents ^[17]	pg/l	0.65 ^[8]	[22]
Tetrachloroethylene	µg/l	[6]	21 ^[19]

<u>Constituent</u>	<u>Units</u>	<u>DISCHARGE LIMITATIONS^{[2][5]}</u>	<u>EFFLUENT QUALITY PERFORMANCE GOALS^[18]</u>
		<u>30-day Average</u>	<u>30-day Average</u>
Toxaphene	ng/l	35 ^[8]	^[22]
2,4,6-Trichlorophenol	µg/l	49	12 ^[19]

Footnotes for Effluent Limitations

- [1] The daily mass emission calculations are based on the average design flow rate of 385 million gallons per day (mgd).
- [2] All analytical data shall be reported uncensored with detection limits and quantitation limits identified. Compliance will be determined using appropriate statistical methods to evaluate multiple samples.
- [3] The daily maximum effluent concentration limit shall apply to flow-weighted 24-hour composite samples.
- [4] Until December 31, 2002, CSDLAC shall comply with the interim limits set forth in the Board Cease and Desist Order No. 88-134 and Consent Decree No. 92 0061 RG (JRx).
- [5] Effluent Limitations for these constituents are based on Ocean Plan objectives using an initial dilution ratio of 1 part effluent to 166 parts of seawater.
- [6] The calculated limits based on Ocean Plan objectives are orders-of-magnitude higher than the prescribed performance goal values, therefore, no numerical limits are prescribed.
- [7] The discharger may at its option meet this limitation as a Total Chromium limitation.
- [8] These constituents have calculated numerical limits (based on the Ocean Plan) which are below the Method Detection Limits (MDL). Compliance shall be determined based on Practical Quantitation Level (PQL). Published values for MDLs and PQLs should be used except where revised MDLs and PQLs are available from recent laboratory performance evaluations, in which case the revised MDLs and PQLs should be used. If performance PQLs are not available then it shall be determined by multiplying the method detection limit with the Ocean Plan factors (5 for carcinogens and 10 for non-carcinogens). All analytical data shall be reported uncensored with detection limits and practical quantitation levels (PQLs) identified.
- [9] HCH means the sum of the alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.
- [10] a. Chronic Toxicity Units (TUc)
- $$TUc = \frac{100}{NOEL}$$
- b. No Observed Effect Level (NOEL)
- The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Appendix II of the California Ocean Plan adopted and effective March 22, 1990.

- [11] Sum of chlordane-alpha, chlordene-gamma, chlordene-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma and oxychlordane.
- [12] Sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD.
- [13] Sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.
- [14] Sum of heptachlor and heptachlor epoxide
- [15] Sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.
- [16] Sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
- [17] Sum of the concentration of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below:

<u>Isomer Group</u>	<u>Toxicity Equivalence Factor</u>
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8-tetra CDF	0.1
1,2,3,7,8-penta CDF	0.05
2,3,4,7,8-penta CDF	0.5
2,3,7,8-hexa CDFs	0.1
2,3,7,8-hepta CDFs	0.01
octa CDF	0.001

- [18] The performance goals are based upon the actual performance of the JWPCP and are specified only as an indication of the treatment efficiency of the facility. They are not considered as limitations or standards for the regulation of the treatment facility. CSDLAC shall make best efforts to maintain effluent quality performance goals. The Executive Officer may modify any of the performance goals if the CSDLAC requests and has demonstrated that the change is warranted.
- [19] Numerical Effluent Quality Performance Goals were derived statistically using data in Discharge Monitoring Reports for the period January 1992 to September 1996. The discharge performance goal was set at the 95th percentile (Upper Confidence Limit) using the formula,

$$\bar{\text{Limit}} = \bar{X} + [t(1, \alpha, 0.05), v] * S_x$$

where,

\bar{X} is the sample mean,

$[t(1, \alpha, 0.05), v]$ is the one tailed t-value for 95% confidence, at v degrees of freedom, and

<u>Constituent</u>	<u>Unit</u>	<u>Discharge Limitations</u>		
		<u>Average</u> <u>30-day</u>	<u>7-day</u>	<u>Daily</u> <u>Maximum</u>
BOD ₅ 20°C	mg/L	120	180	-----
Suspended solids	mg/L	90	135	-----
Oil and grease	mg/L	15	22.5	45
Settleable solids	ml/L	0.5	0.75	1.5
Turbidity	NTU	75	100	225

III. MASS EMISSION RATES

Mass emission caps are applied to the four pollutants of concern (copper, lead, silver, and zinc) that are causing or could cause deterioration of beneficial uses of the Santa Monica Bay. CSDLAC should make best efforts to discharge the pollutants of concern below the cap values. Any exceedance of the emission rates including the cause(s) of exceedance and any proposed corrective measures if necessary, shall be included in the annual report. The mass emission performance caps are not enforceable limitations. The Executive Officer may modify any of the mass emission cap values if the CSDLAC requests and demonstrates that the change is warranted.

The caps are based on the average emission rate for the five year period ('92-'96) adjusted by a factor of 1.16 (design flow of 385 mgd ÷ average flow of 330 mgd for past five years) to normalize to the design flow of 385 mgd.

<u>Parameter</u>	<u>Mass Emission Rate (CAP), Lbs/year</u>
Copper	27,990
Lead	9,702
Silver	6,950
Zinc	91,840

IV. RECEIVING WATER LIMITATIONS

1. Floating particulates and oil and grease shall not be visible as a result of wastes discharged.
2. Wastes discharged shall not alter the color of the receiving waters; create a visual contrast

with the natural appearance of the water; nor cause aesthetically undesirable discoloration of the ocean surface.

3. The transmittance of natural light shall not be significantly reduced at any point outside the zone of initial dilution (ZID) as a result of wastes discharged.
4. The rate of deposition and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded as a result of wastes discharged.
5. The wastes discharged shall not depress the dissolved oxygen concentration outside the ZID at any time more than 10 percent from that which occurs naturally, excluding effects of naturally induced upwelling.
6. The wastes discharged shall not change the pH of the receiving waters at any time more than 0.2 units from that which occurs naturally outside the ZID.
7. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions as a result of wastes discharged.
8. The concentration in marine sediments of substances listed in Effluent Limitations Table 1.b.i. above shall not be increased to levels in marine sediments which would degrade indigenous biota as a result of wastes discharged.
9. The concentration of organic materials in marine sediments shall not be increased above that which would degrade marine life as a result of wastes discharged.
10. Wastes discharged shall not cause objectionable aquatic growths or degrade indigenous biota.
11. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded as a result of wastes discharged.
12. The concentration of organic materials in fish, shellfish or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health as a result of wastes discharged.
13. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered as a result of wastes discharged.
14. The wastes discharged shall not cause objectionable odors to emanate from the receiving waters.

B. PRETREATMENT REQUIREMENTS

1. CSDLAC shall implement and enforce its approved pretreatment program. CSDLAC shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR part 403 including subsequent regulatory revisions thereof. Where Part 403 or subsequent revision places mandatory actions upon the CSDLAC as Control Authority but does not specify a timetable for completion of the actions, the CSDLAC shall complete the required actions within six months from the issuance date of this Order and permit or the effective date of the Part 403 revisions, whichever comes later. For violations of pretreatment requirements, the CSDLAC shall be subject to enforcement actions, penalties, fines, and other remedies by USEPA, Regional Board, or other appropriate parties, as provided in the Clean Water Act. EPA or the Regional Board may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the Clean Water Act and/or the California Water Code.
2. The CSDLAC shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402(b) of the Clean Water Act with timely, appropriate and effective enforcement actions. The CSDLAC shall cause industrial users subject to the Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of the new industrial user, upon commencement of the discharge.
3. The CSDLAC shall perform the pretreatment functions as required in the Federal Regulations 40 CFR Part 403 including, but not be limited to:
 - a. Implement the necessary legal authorities as provided in 40 CFR 403.8(f)(1);
 - b. Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;
 - c. Implement the programmatic functions as provided in 40 CFR 403.8(f)(2); and
 - d. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8 (f)(3).
 - e. The CSDLAC shall submit annually a report to EPA, Regional Board, and State Board describing the CSDLAC's pretreatment activities over the previous year. In the event of noncompliance with any conditions or requirements of this permit, the CSDLAC shall include the reasons for noncompliance and state how and when the CSDLAC shall comply with such conditions and requirements. This annual report shall cover operations from January 1 through December 31 of the previous year and is due on April 1 of each year and shall contain, but not be limited to, the information required in the attached "Requirements for Pretreatment - Annual

Report" (Attachment No. P), or an approved revised version thereof.

C. REQUIREMENTS AND PROVISIONS

1. The bypassing of untreated waste to the ocean is prohibited.
2. The discharge of municipal and industrial waste sludge to the ocean, or into a waste stream that discharges to the ocean, is prohibited.
3. The discharge of sludge digester supernatant and centrate directly to the ocean, or into a waste stream that discharges to the ocean without further treatment is prohibited.
4. The discharger shall conduct a special study to evaluate the performance of the secondary treatment system. Prior to implementation of the study, the workplan shall be submitted to the Executive Officer for approval. The results of the study shall be submitted with the Report of Waste Discharge for the reissuance of these waste discharge requirements and permit.
5. The discharger shall conduct a special study to investigate potential toxic effects associated with the formation of chlorinated compounds from chlorination of the effluent. The study will comprise of performing parallel chronic toxicity testing with chlorinated and unchlorinated effluent. At a minimum, this parallel testing shall be conducted once per month for three months using both giant kelp (*Macrocystis pyrifera*) and sea urchin (*Strongylocentrotus purpuratus* or *S. franciscanus*) as test organisms. Additional parallel testing may be required to demonstrate statistical difference between the two treatments. Test results shall be reported to the Regional Board within 30 days following completion of each toxicity testing event. The special study shall be completed within 12 months from the effective date of this Order.

If the special study indicates a significant difference in toxicity between the unchlorinated and chlorinated effluents, within 90 days of completion of the special study, but not later than September 30, 1998, the Regional Board shall reopen this Order to consider requiring CSDLAC to perform a chlorination study to optimize chlorine usage.

6. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act or amendments thereto, the Board may revise and modify this Order and permit in accordance with such more

17. This Order includes the attached "Biosolids Requirements" (Attachment B). The CSDLAC must submit all required information and comply with the monitoring, reporting, and record-keeping programs as specified in these requirements.
18. If an applicable "acceptable" management practice or numerical limitation for pollutants in biosolids promulgated under Section 405 (d) (2) of the Clean Water Act, as amended by the Water Quality Act of 1987, is more stringent than the biosolids pollutant limit or acceptable management practice in this permit, this permit may be reopened to include requirements promulgated under such section. Regardless of whether or not the permit is modified, the CSDLAC shall comply with the limitations no later than the compliance date specified in the applicable regulations as required by Section 405 (d) (2) (D) of the Clean Water Act.

D. EXPIRATION DATE

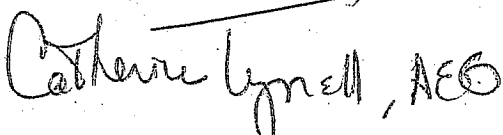
This Order expires on May 10, 2002.

The discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the expiration date as application for issuance of new waste discharge requirements.

E. RESCISSION

Order No. 91-112 adopted by this Board on October 28, 1991, are hereby rescinded except for enforcement purposes.

I, Dennis A. Dickerson, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on June 16, 1997.

 Catherine Lynell, AEO

DENNIS A. DICKERSON
Executive Officer